Chronic Disease Indicators: Indicator Definition

Influenza vaccination among adults aged >= 18 years with diabetes

Category:	Diabetes
Demographic Group:	Resident persons aged >=18 years.
Numerator:	Respondents aged >=18 years ever told by a doctor or health professional that they have diabetes (excluding women who were told only when pregnant) who report having received an influenza vaccination in the previous 12 months.
Denominator:	Respondents age >=18 years ever told by a doctor or health professional that they have diabetes (excluding women who were told only when pregnant, refusals, and unknowns).
Measures of Frequency:	Annual prevalence — crude and age-adjusted (as standardized by the CDC Division of Diabetes Translation to the 2000 U.S. Standard Population, using the direct method) — with 95% confidence interval. Where feasible, 3-year averages were used. Not all states have complete data for each year of monitoring; therefore, each 3-year average estimate is composed of at least two years of data. U.S. estimates are based on single years of data.
Time Period of Case Definition:	Previous 12 months.
Background:	In 2001, approximately 54% of adults with diabetes reported receiving an influenza vaccination in the previous 12 months.
Significance :	An annual influenza vaccination might prevent or attenuate the clinical course of respiratory illness attributable to influenza. Compared with persons without diabetes, mortality from pneumonia and influenza has been demonstrated to be >=7 times higher among persons with diabetes diagnosed before age 30 years and approximately 2 times higher among persons with diabetes first diagnosed after age 30 years.
Limitations of Indicator:	Respondents might not distinguish between influenza and pneumococcal (Streptococcus pneumoniae) vaccinations.
Data Resources:	Behavioral Risk Factor Surveillance System (BRFSS). http://www.cdc.gov/diabetes/statistics/
Limitations of Data Resources:	Data from multiple years might be aggregated to increase the sample size. As with all self-reported sample surveys, BRFSS data might be subject to systematic error resulting from noncoverage (e.g., lower telephone coverage among populations of low socioeconomic status), nonresponse (e.g., refusal to participate in the survey or to answer specific questions), or measurement (e.g., social desirability or recall bias). The National Health Interview Survey (NHIS) can be used as an alternative data source; however, the size of the sample from NHIS might not be adequate for calculating stable, state-specific estimates.
Healthy People 2010 Objectives:	14-29: Increase the proportion of adults (noninstitutionalized adults aged >=65 years) who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease. (14-29c is specific for influenza vaccination among noninstitutionalized high-risk adults aged 18 to 64 years.)

* See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20. http://www.cdc.gov/nchs/data/statnt/statnt20.pdf